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SUPPLEMENTATION OF BRED DOES AND DOES NURSING FAWNS

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Background. Non-native deer that are seasonal breeders such as fallow and red, generally fawn from May through July. Nutritional requirements for mature does are greatest after fawning because of milk production and need to regain body condition. During this period in the southeastern U.S., available pastures consist of warm-season perennial grasses such as bermudagrass, bahiagrass, and dallisgrass. These warm-season grasses have lower nutritive value than legumes or cool-season grasses. Management practices to maintain these grasses at as high a nutritive value as possible consist of a good fertilization program and keeping them in a young growing stage. A study was conducted at the TAMU Agricultural Research and Extension Center at Overton to determine if supplementation during the summer would enhance animal performance.

Coastal bermudagrass pastures that had been overseeded with rye and ryegrass the previous autumn were mowed off in late May and fertilized according to soil test. Two groups of bred fallow does weighing about 110 lb were stocked at 12 head/acre on 1 acre pastures and two groups of red deer hinds weighing about 245 lb were stocked at 6 head/acre on 2 acre pastures. On June 18 the red deer stocking rate was reduced from 12 to 9 head/pasture (4.5 head/acre) because of insufficient forage. One group of each species was fed a soybean meal-cracked corn supplement (25% soybean meal : 75% cracked corn) at 1% of body weight each day. Both red deer groups had access to Coastal bermudagrass hay beginning August 8 because poor moisture conditions limited pasture growth. Red deer hinds fawned from June 30 to July 26 and fallow does fawned from May 31 to July 21. In order to maintain the proper stocking rates, red deer hinds that had lost their fawns were replaced with other hinds and their fawns on June 17 and fallow does that had lost their fawns were replaced with does and their fawns on July 26. Weight and body condition scores were recorded at the beginning and end of the study. Fawns were weighed at the end of the study to determine average daily gain (ADG). The study was terminated on September 2 due to drought.

Research Findings. Supplementation had the greatest effect on percent fawn loss in the red deer. Four of the nine supplemented red deer hinds (44%) lost their fawns because of abortion, born dead, or fawns died shortly after birth (Table 1). All red deer fawns in the control group survived. Two of the twelve fallow fawns in the control group died but this is not considered abnormal. All fallow fawns in the supplemented group survived. All fallow and red

deer females lost weight from before fawning to the end of the study, but those receiving supplement lost slightly less weight. Supplementing during the summer did prevent a loss in body condition score for both fallow and red deer. Fawns nursing females that received supplement had a slightly higher average daily gain than fawns nursing females not supplemented.

Application. In the southeastern U.S. production of forage with low nutritive value occurs during the summer when deer that are seasonal breeders are nursing fawns. Summer perennial grasses can be low in both protein and energy. Soybean meal is a good protein source and corn is a good energy source. Feeding a soybean-cracked corn mix at 1% of body weight (1 lb supplement per 100 lb of body weight) did prevent a drop in body condition and caused a slight increase in ADG of the fawns. The high fawn death rate of supplemented red deer hinds suggests that red deer hinds should not be supplemented if adequate pasture is available until after fawning. Drs. Haigh and Dr. Hudson report that nutrition during the last month of pregnancy must be carefully controlled to prevent red deer hinds from becoming overweight. They recommend supplementary feeding should be reduced or stopped. Although the protein and energy needs of red deer hinds increase right before fawning, Haigh and Hudson believe it is better for the hinds to meet some of these needs by mobilizing body tissues. Initial body condition scores of the red deer hinds used in this study ranged from 5.5 to 7.5 and would not be considered excessively fat. However, based on our data, we recommend caution in supplementing red deer hinds until after fawning. If forage is limited in late spring or early summer because of drought or overstocking, it would be more prudent to provide a good quality hay. There should be no problem supplementing bred fallow does if they are in poor to medium body condition.

Table 1. Weight, body condition score, and percent fawn loss for fallow does and red deer hinds grazing Coastal bermudagrass with and without supplement.

Treatment	Fawn Loss	Weight Change	BCS= Change	Fawn ADG
	%	lb		lb/day
Fallow control	17	-11.9	-3.1	0.32
supplemented	0	-8.8	-0.5	0.44
Red Deer control	0	-17.1	-2.4	0.71
supplemented	44	-15.2	-0.1	0.82

=BCS (body condition score) 1 = very thin, 9 = very fat. BCS at initiation of study ranged from 5.0 to 7.5.